

BRAKE BANDS FOR AN AUTOMATIC TRANSMISSION AND METHOD FOR  
CONTROLLING A GEAR SHIFT IN AUTOMATIC TRANSMISSION AND  
FEEDBACK LOOP CONTROL SYSTEM

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## ABSTRACT OF THE DISCLOSURE

A brake band shifting mechanism for an automatic transmission. The brake  
band shifting mechanism includes a brake band encircling a brake drum of the  
transmission. A first end of the brake band is mounted to a secured portion of the  
transmission by a first linkage and a second end of the brake band is mounted to a  
two-stage servo by a second linkage. The servo provides selective apply and  
release pressure to the second linkage to control the compression or expansion of  
the brake band. In operation, the brake band is quickly compressed to the brake  
drum during the first stage of the servo, and then fine adjustments are made to  
control the speed of the brake drum during the second stage of the servo, where  
inputs from position and speed sensors in the transmission are used to control the  
adjustment of the brake band.

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